

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-103 (Previously Cancelled)

104. (Currently Amended) A cleaning ~~and whitening~~ system for teeth, comprising:

a toothbrush having a cleaning surface, the toothbrush comprising a source of electromagnetic radiation configured to direct polychromatic electromagnetic radiation toward the cleaning surface, wherein the polychromatic electromagnetic radiation consists essentially of wavelengths from 300 to 750 nanometers, wherein an output configuration of the source of electromagnetic energy is relatively low such that electromagnetic radiation can be emitted toward the cleaning surface of the toothbrush during brushing to enhance ~~whitening and~~ cleaning of the teeth when used in combination with a dentifrice; and

a dentifrice comprising a photosensitive agent dispersed throughout the dentifrice, the dentifrice being adapted to be dispersed over a target surface and to transmit the polychromatic electromagnetic radiation, whereby during use a significant portion of the dispersed photosensitive agent over the target surface receives the polychromatic electromagnetic radiation, thus enabling the significant portion of the dispersed photosensitive agent to react, ~~the photosensitive agent comprising a whitening compound.~~

105. (Currently Amended) The system of claim ~~104~~211, wherein the whitening compound is a peroxy compound.

106. (Previously Added) The system of claim 104, wherein the dentifrice comprises about 1.5% peroxide.

107. (Currently Amended) The system of claim ~~104~~211, wherein the whitening compound is hydrogen peroxide or carbamide peroxide.
108. (Previously Added) The system of claim 104, wherein the source of electromagnetic radiation comprises a continuous wave source of electromagnetic radiation.
109. (Previously Added) The system of claim 104, wherein the toothbrush comprises bristles and is constructed to direct electromagnetic radiation through the bristles toward the cleaning surface.
110. (Currently Amended) The system of claim 104, wherein the toothbrush comprises bristles and is constructed to direct electromagnetic radiation around, ~~rather than through~~, the bristles toward the cleaning surface
111. (Previously Added) The system of claim 104, wherein the dentifrice is a clear gel.
112. (Previously Added) The system of claim 104, wherein the polychromatic electromagnetic radiation consists essentially of a band of wavelengths from 300 to 750 nanometers.
113. (Cancelled)
114. (Currently Amended) The system of claim ~~113~~212, wherein the dentifrice is aqueous and at least a portion of the salt compound is dissolved in the dentifrice.
115. (Currently Amended) The system of claim ~~113~~183, wherein the dentifrice comprises about 1.5% peroxide.
116. (Currently Amended) The system of claim ~~113~~183, wherein the source of electromagnetic radiation comprises a continuous wave source of electromagnetic radiation.

117. (Currently Amended) The system of claim ~~443~~183, wherein the toothbrush comprises bristles and is constructed to direct electromagnetic radiation through the bristles toward the cleaning surface.

118. (Currently Amended) The system of claim ~~443~~183, wherein the toothbrush comprises bristles and is constructed to direct electromagnetic radiation around the bristles toward the cleaning surface.

119. (Currently Amended) The system of claim ~~443~~183, wherein the dentifrice is a clear gel.

120. (Currently Amended) The system of claim ~~443~~183, wherein the polychromatic electromagnetic radiation consists essentially of a band of wavelengths from 300 to 750 nanometers.

121. (Currently Amended) A cleaning ~~and whitening~~ system for teeth, comprising:

a toothbrush having a cleaning surface and a source of electromagnetic radiation constructed to direct electromagnetic radiation toward the cleaning surface, wherein the electromagnetic radiation is at least substantially free of ultraviolet radiation; and

a dentifrice comprising a photosensitive agent, which is dispersed throughout the dentifrice ~~and which comprises a whitening compound~~, wherein during use the dentifrice is dispersed over a target surface and the dentifrice has a transparency sufficient to transmit the electromagnetic radiation, whereby a significant portion of the dispersed photosensitive agent over the target surface receives the electromagnetic radiation during use of the system, thus enabling the significant portion of the dispersed photosensitive agent to react.

122. (Currently Amended) The system of claim ~~424~~213, wherein the whitening compound is hydrogen peroxide or carbamide peroxide.

123. (Currently Amended) The system of claim ~~424~~213, wherein the whitening compound is a peroxy compound.

124. (Previously Added) The system of claim 121, wherein the dentifrice comprises about 1.5% peroxide.

125. (Previously Added) The system of claim 121, wherein the source of electromagnetic radiation comprises a continuous wave source of electromagnetic radiation.

126. (Previously Added) The system of claim 121, wherein the source of electromagnetic radiation comprises a source of polychromatic electromagnetic radiation.

127. (Previously Added) The system of claim 126, wherein the source of polychromatic electromagnetic radiation comprises a light emitting diode.

128. (Previously Added) The system of claim 121, wherein the source of electromagnetic radiation comprises a source of monochromatic electromagnetic radiation.

129. (Previously Added) The system of claim 128, wherein the source of electromagnetic radiation comprises a continuous wave source of electromagnetic radiation.

130. (Previously Added) The system of claim 128, wherein the source of monochromatic electromagnetic radiation comprises a light emitting diode.

131. (Previously Added) The system of claim 121, wherein the toothbrush comprises bristles and is constructed to direct electromagnetic radiation through the bristles toward the cleaning surface.

132. (Currently Amended) The system of claim 121, wherein the toothbrush comprises bristles and is constructed to direct electromagnetic radiation around, ~~rather than through,~~ the bristles toward the cleaning surface.

133. (Previously Added) The system of claim 121, wherein the dentifrice is a clear gel.

134. (Cancelled)

135. (Currently Amended) The system of claim ~~134~~14, wherein the dentifrice is aqueous and at least a portion of the salt compound is dissolved in the dentifrice.

136. (Currently Amended) The system of claim ~~134~~191, wherein the source of electromagnetic radiation comprises a continuous wave source of electromagnetic radiation.

137. (Currently Amended) The system of claim ~~134~~191, wherein the source of electromagnetic radiation comprises a source of polychromatic electromagnetic radiation.

138. (Previously Added) The system of claim 137, wherein the source of polychromatic electromagnetic radiation comprises a light emitting diode.

139. (Currently Amended) The system of claim ~~134~~191, wherein the source of electromagnetic radiation comprises a source of monochromatic electromagnetic radiation.

140. (Previously Added) The system of claim 139, wherein the source of electromagnetic radiation comprises a continuous wave source of electromagnetic radiation.

141. (Previously Added) The system of claim 139, wherein the source of monochromatic electromagnetic radiation comprises a light emitting diode.

142. (Currently Amended) The system of claim ~~134~~191, wherein the toothbrush comprises bristles and is constructed to direct electromagnetic radiation through the bristles toward the cleaning surface.

143. (Currently Amended) The system of claim ~~134~~191, wherein the toothbrush comprises bristles and is constructed to direct electromagnetic radiation around, ~~rather than~~

through, the bristles toward the cleaning surface.

144. (Currently Amended) The system of claim ~~134~~191, wherein the dentifrice is a clear gel.

145. (Currently Amended) The system of claim ~~134~~191, wherein the dentifrice comprises about 1.5% peroxide.

146. (Currently Amended) A teeth cleaning ~~and whitening~~ system, comprising:

a. a dentifrice comprising a photosensitive agent that reacts substantially only to electromagnetic radiation within a predetermined range wherein:

i. the photosensitive agent is dispersed throughout the dentifrice ~~and comprises a whitening compound~~;

ii. the dentifrice is dispersed over a target surface during use of the system; and

iii. the dentifrice has a transparency sufficient to transmit the electromagnetic radiation, whereby a significant portion of the dispersed photosensitive agent over the target surface receives the electromagnetic radiation during use of the system, thus enabling the significant portion of the dispersed photosensitive agent to react; and

b. a toothbrush having a cleaning surface, the toothbrush comprising an LED or a source of electromagnetic radiation constructed to direct electromagnetic radiation toward the cleaning surface, wherein the electromagnetic radiation is bound to wavelengths that are substantially within the predetermined range.

147. (Currently Amended) The system of claim ~~146~~215, wherein the whitening compound is hydrogen peroxide or carbamide peroxide.

148. (Currently Amended) The system of claim ~~146~~215, wherein the whitening compound is a peroxy compound.

149. (Previously Added) The system of claim 146, wherein the dentifrice comprises about 1.5% peroxide.
150. (Previously Added) The system of claim 146, wherein the electromagnetic radiation is continuous-wave electromagnetic radiation.
151. (Previously Added) The system of claim 146, wherein the electromagnetic radiation is polychromatic electromagnetic radiation.
152. (Previously Added) The system of claim 146, wherein electromagnetic radiation is monochromatic electromagnetic radiation.
153. (Previously Added) The system of claim 152, wherein the electromagnetic radiation is continuous-wave electromagnetic radiation.
154. (Previously Added) The system of claim 153, wherein the monochromatic electromagnetic radiation is emitted from a light emitting diode.
155. (Previously Added) The system of claim 146, wherein the toothbrush comprises bristles and is constructed to direct electromagnetic radiation through the bristles toward the cleaning surface.
156. (Currently Amended) The system of claim 146, wherein the toothbrush comprises bristles and is constructed to direct electromagnetic radiation around, ~~rather than through~~, the bristles toward the cleaning surface.
157. (Previously Added) The system of claim 146, wherein the dentifrice is a clear gel.
158. (Cancelled)

159. (Currently Amended) The system of claim ~~158~~216, wherein the dentifrice is aqueous and at least a portion of the salt compound is dissolved in the dentifrice.

160. (Currently Amended) The system of claim ~~158~~199, wherein the electromagnetic radiation is continuous-wave electromagnetic radiation.

161. (Currently Amended) The system of claim ~~158~~199, wherein the electromagnetic radiation is polychromatic electromagnetic radiation.

162. (Previously Added) The system of claim 161, wherein the electromagnetic radiation is continuous-wave electromagnetic radiation.

163. (Currently Amended) The system of claim ~~158~~199, wherein the electromagnetic radiation is monochromatic electromagnetic radiation.

164. (Currently Amended) The system of claim 163, wherein the electromagnetic radiation is continuous-wave electromagnetic radiation.:

165. (Previously Added) The system of claim 164, wherein the monochromatic electromagnetic radiation is emitted from a light emitting diode.

166. (Currently Amended) The system of claim ~~158~~199, wherein the toothbrush comprises bristles and is constructed to direct electromagnetic radiation through the bristles toward the cleaning surface.

167. (Currently Amended) The system of claim ~~158~~199, wherein the toothbrush comprises bristles and is constructed to direct electromagnetic radiation around, ~~rather than through,~~ the bristles toward the cleaning surface.

168. (Currently Amended) The system of claim ~~158~~199, wherein the dentifrice is a clear

gel.

169. (Currently Amended) The system of claim ~~158~~199, wherein the dentifrice comprises about 1.5% peroxide.

170. (Currently Amended) A method, comprising:

- a. providing a dentifrice, wherein the dentifrice comprises a photosensitive ~~whitening agents~~ agent;
- b. providing an electromagnetic radiation emitting toothbrush;
- c. placing the dentifrice into contact with a portion of the electromagnetic radiation emitting toothbrush; and
- d. activating the electromagnetic radiation emitting toothbrush such that the electromagnetic radiation emitting toothbrush emits electromagnetic radiation wavelengths consisting essentially of non-ultraviolet radiation during brushing.

171. (Previously Added) The method of claim 170, wherein the electromagnetic radiation is continuous-wave electromagnetic radiation.

172. (Previously Added) The method of claim 170, wherein the electromagnetic radiation consists essentially of wavelengths within a range of 300 to 750 nanometers.

173. (Previously Added) The method of claim 170, wherein the electromagnetic radiation is polychromatic electromagnetic radiation.

174. (Previously Added) The method of claim 173, wherein the electromagnetic radiation consists essentially of a band of wavelengths from 300 to 750 nanometers.

175. (Previously Added) The method of claim 174, wherein the electromagnetic radiation is continuous-wave electromagnetic radiation.

176. (Previously Added) The method of claim 170, wherein electromagnetic radiation is monochromatic electromagnetic radiation.

177. (Previously Added) The method of claim 176, wherein the electromagnetic radiation is continuous-wave electromagnetic radiation.

178. (Previously Added) The method of claim 176, wherein the monochromatic electromagnetic radiation is emitted from a light emitting diode.

179. (Currently Amended) The method of claim 170, wherein the toothbrush comprises bristles and is constructed to direct ~~electromagnetic~~⁷ electromagnetic radiation through the bristles.

180. (Currently Amended) The method of claim 170, wherein the toothbrush comprises bristles and is constructed to direct electromagnetic radiation around ~~rather than through~~ the bristles.

181. (Previously Added) The method of claim 170, wherein the dentifrice is a clear gel.

182. (Previously Added) The system of claim 170, wherein the dentifrice comprises about 1.5% peroxide.

183. (Previously Added) The system of claim 104, wherein the dentifrice comprises an anti-caries agent.

184. (Previously Added) The system of claim 183, wherein the dentifrice comprises a clear gel that maximizes transmission of electromagnetic radiation therethrough, to thereby maximize an interaction of the clear gel with the radiation throughout a thickness of the clear gel.

185. (Previously Added) The system of claim 183, wherein the anti-caries agent comprises fluoride.

186. (Previously Added) The system of claim 185, wherein the dentifrice comprises a clear gel that maximizes transmission of electromagnetic radiation therethrough, to thereby maximize an interaction of the clear gel with the radiation throughout a thickness of the clear gel.

187. (Cancelled)

188. (Cancelled)

189. (Cancelled)

190. (Cancelled)

191. (Previously Added) The system of claim 121, wherein the dentifrice comprises an anti-caries agent.

192. (Previously Added) The system of claim 191, wherein the dentifrice comprises a clear gel that maximizes transmission of electromagnetic radiation therethrough, to thereby maximize an interaction of the clear gel with the electromagnetic radiation throughout a thickness of the clear gel.

193. (Previously Added) The system of claim 191, wherein the anti-caries agent comprises fluoride.

194. (Previously Added) The system of claim 193, wherein the dentifrice comprises a clear gel that maximizes transmission of electromagnetic radiation therethrough, to thereby

maximize an interaction of the clear gel with the electromagnetic radiation throughout a thickness of the clear gel.

195. (Cancelled)

196. (Cancelled)

197. (Cancelled)

198. (Cancelled)

199. (Previously Added) The system of claim 146, wherein the dentifrice comprises an anti-caries agent.

200. (Previously Added) The system of claim 199, wherein the dentifrice comprises a clear gel that maximizes transmission of electromagnetic radiation therethrough, to thereby maximize an interaction of the clear gel with the electromagnetic radiation throughout a thickness of the clear gel.

201. (Previously Added) The system of claim 199, wherein the anti-caries agent comprises fluoride.

202. (Previously Added) The system of claim 201, wherein the dentifrice comprises a clear gel that maximizes transmission of electromagnetic radiation therethrough, to thereby maximize an interaction of the clear gel with the electromagnetic radiation throughout a thickness of the clear gel.

203. (Cancelled)

204. (Cancelled)

205. (Cancelled)

206. (Cancelled)

207. (Previously Added) The method of claim 170, wherein the dentifrice comprises an anti-caries agent.

208. (Previously Added) The method of claim 207, wherein the dentifrice comprises a clear gel that maximizes transmission of electromagnetic radiation therethrough, to thereby maximize an interaction of the clear gel with the electromagnetic radiation throughout a thickness of the clear gel.

209. (Previously Added) The method of claim 207, wherein the anti-caries agent comprises fluoride.

210. (Previously Added) The method of claim 209, wherein the dentifrice comprises a clear gel that maximizes transmission of electromagnetic radiation therethrough, to thereby maximize an interaction of the clear gel with the electromagnetic radiation throughout a thickness of the clear gel.

211. (New) The system of claim 104, wherein the photosensitive agent comprises a whitening compound.

212. (New) The system of claim 104, wherein the photosensitive agent comprises one or more salt compounds.

213. (New) The system of claim 121, wherein the photosensitive agent comprises a whitening compound.

214. (New) The system of claim 121, wherein the photosensitive agent comprises one or more salt compounds.
215. (New) The system of claim 146, wherein the photosensitive agent comprises a whitening compound.
216. (New) The system of claim 146, wherein the photosensitive agent comprises one or more salt compounds.
217. (New) The method of claim 170, wherein the photosensitive agent comprises a whitening agent.
218. (New) The system of claim 183, wherein the dentifrice comprises a clear gel that allows the electromagnetic radiation to reach the anti-caries agent throughout the clear gel.
219. (New) The system of claim 218, wherein the electromagnetic radiation reaches the anti-caries agent to produce an anti-caries effect.
220. (New) The system of claim 185, wherein the dentifrice comprises a clear gel that allows the electromagnetic radiation to reach the anti-caries agent throughout the clear gel.
221. (New) The system of claim 220, wherein the electromagnetic radiation reaching the anti-caries agent produces an anti-caries effect.
222. (New) The system of claim 191, wherein the dentifrice comprises a clear gel that allows the electromagnetic radiation to reach the anti-caries agent throughout the clear gel.
223. (New) The system of claim 222, wherein the electromagnetic radiation reaches the anti-caries agent to produce an anti-caries effect.

224. (New) The system of claim 193, wherein the dentifrice comprises a clear gel that allows the electromagnetic radiation to reach the anti-caries agent throughout the clear gel.

225. (New) The system of claim 224, wherein the electromagnetic radiation reaching the anti-caries agent produces an anti-caries effect.

226. (New) The system of claim 199, wherein the dentifrice comprises a clear gel that allows the electromagnetic radiation to reach the anti-caries agent throughout the clear gel.

227. (New) The system of claim 226, wherein the electromagnetic radiation reaching the anti-caries agent produces an anti-caries effect.

228. (New) The system of claim 201, wherein the dentifrice comprises a clear gel that allows the electromagnetic radiation to reach the anti-caries agent throughout the clear gel.

229. (New) The system of claim 228, wherein the electromagnetic radiation reaches the anti-caries agent to produce an anti-caries effect.

230. (New) The system of claim 207, wherein the dentifrice comprises a clear gel that maximizes transmission of electromagnetic radiation to allow the electromagnetic radiation to reach the anti-caries agent throughout the clear gel.

231. (New) The system of claim 230, wherein the electromagnetic radiation reaching the anti-caries agent produces an anti-caries effect.

232. (New) The system of claim 209, wherein the dentifrice comprises a clear gel that maximizes transmission of electromagnetic radiation to allow the electromagnetic radiation to reach the anti-caries agent throughout the clear gel.

233. (New) The system of claim 232, wherein the electromagnetic radiation reaching the anti-caries agent produces an anti-caries effect.